

ABSTRACT OF THE DISCLOSURE

An immunogenic complex, essentially consisting of neisserial outer membrane protein proteosomes hydrophobically complexed to native purified bacterial lipopolysaccharide and formulated in accordance with the current invention for mucosal delivery such as via the oral or intranasal route is used as a vaccine. Specifically, a vaccine using shigella lipopolysaccharides complexed to proteosomes for such mucosal administration induces IgG and IgA antibodies in sera and in respiratory and intestinal fluids. Furthermore, such antibodies are associated with protection against shigella infection and these vaccines are herein demonstrated to protect against mucosal infection with shigella.